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## CAA Establishes New Unit To Study Airport Management

How can communities manage their airports efficiently and make them pay their way?

The CAA has created an Airport Management Unit, objective of which is to look for the answer in the Nation's 1,700 publicly-owned airports and to make its findings available to all owners and managers.

Facts disclosed will be assembled and made available to operators in moving their accounts from the red to the black side of the ledger.

Among the sources of income, common to almost all airports, are landing fees, concessions of all kinds, rentals, observation admissions, and special events such as air shows and racing.

The first job of the new unit will be to set up a system for the tabulation of material in each region.

### Over-all Picture

Completed, the data will give an overall picture of methods proven bad and those of demonstrated value. Need for such material was disclosed by the number of queries reaching the Airports Division of CAA asking help in handling perplexing managerial situations in all parts of the country.

In discussing the new unit, J. Kirk Baldwin, its head, explained "The CAA is well aware that the future of commercial aviation depends largely upon successful airport management and realizes that remedial measures must be taken at once if peace is not to find the industry unprepared for the demands which will be made upon it.

### Cooperative Venture

"Preparing to meet the situation, before it actually is present," he went on, "the CAA has solicited the aid and support of airport owners, operators, managers, airline officials, manufacturers, fixed base operators, and others, including state and municipal officials.

"Commercial aviation in its pioneering days received unstinted support which in some cases went to extravagant lengths. States and municipalities made concessions which were far from dividend paying; citizens contributed lavishly of money and time to bring aviation to their communities. Those days are past and civil aviation must now begin 'pulling its weight in the boat,' and the airport is the place to begin building a sound financial structure," he said.

Baldwin is a native of Wyoming, having been born in Cheyenne October 6, 1894. In 1933 he was appointed airport supervisor for Wyoming by Eugene Vidal, Director of the Bureau of Air Commerce. He was one of the organizers of Wyoming Air Service, now known as Inland Air Lines. He owned and operated the Cheyenne Flying Service and held a contract there with the Weather Bureau under which he made daily weather observation flights. He also was Director of the Wyoming Aeronautics Commission and from 1935 to 1939 held the elected office of Wyoming State Treasurer. Since 1939 he has been associated with the Civil Aeronautics Board and the Administration.

**LETTERS TO THE EDITOR**

All inquiries pertaining to the editorial content of the Journal should be addressed thus: Editor, Civil Aeronautics Journal, Reference A253, Civil Aeronautics Administration, Washington 25, D. C.

## GETS TRAVEL ORDERS

First assignment for the recently completed mobile airport traffic control tower shown above is the job of directing air traffic in Winslow, Ariz.

Developed by the CAA and the Army for emergency duty, the traveling tower was dispatched from Washington, D. C., January 13, in answer to the Secretary of War's request that the CAA provide traffic control service at the Winslow municipal airport. The field had no tower and no immediate place to put one.

Driver of the combination truck-tower on its first journey was the assistant radio engineer of the CAA Signals Division. An experienced control tower crew was assembled from various points in the sixth region to meet the tower at Winslow. The tower arrived Jan. 20 and was in operation on the 21st.

It is expected that the mobile tower will remain on the job of directing air traffic at Winslow from 60 to 90 days while a regular tower is being built and equipped.

Self-sufficient, this mobile unit, which can be operated by two men, includes a powerplant capable of producing 5,000 volts for the operation of six intermediate frequency receivers, four ultra-high frequency receivers, a low frequency transmitter, and an ultra-high frequency transmitter.

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# CIVIL AERONAUTICS JOURNAL

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## National Airlines To Serve Key West

In order to take care of the increase of military and civilian travel to and from the naval base at Key West, and to improve air-mail service at that point, the Civil Aeronautics Board has temporarily extended the route of National Airlines from Miami to Key West. The application of Eastern Airlines for the same route was denied.

National now operates a route in Florida from Jacksonville to Miami via Daytona Beach, Orlando, Lakeland, Tampa, St. Petersburg, Sarasota, and Fort Myers. In granting the service to National, the Board pointed out that the airline's operations are primarily directed to meeting the local needs of the region which it serves, while Eastern must meet the demands of long-haul traffic. Since few connections are involved, the Board found that National was in a position to make the necessary changes and conduct the service required with present equipment.

The new service was recommended by the Navy Department which called the Board's attention to the increase in importance and size of naval establishments at Key West and the large amount of time lost by personnel in travel between Miami and Key West. The only transportation now available is by bus—a 5-hour trip.

The authorization will remain in effect until the need for emergency service in the Key West area is no longer necessary.

## Joint Agreement Unifies Traffic Control Procedure

For the first time pilots are getting identical control service at all airport towers operated by the Army Air Forces, the Navy Bureau of Aeronautics and the Civil Aeronautics Administration.

A jointly prepared and adopted manual, "Standard Airport Traffic Control Procedures," governs the control tower activities of the three agencies. The new procedures become effective January 1.

In the past each agency has had its own methods, and while they were generally similar, there were enough minor differences to disconcert a pilot who used landing areas operated by the various agencies. Under the new procedures, the pilot may expect to receive the same type and character of instructions at all points on the globe wherever United States airport traffic control towers are located.

Distribution of this new manual is being handled by the agencies concerned.

## Air Power Needs To Be Revitalized Annually, Claims Stewart

Air power must be strengthened each year by new groups of young men, R. McLean Stewart, Director of Training for the War Training Service, said in a recent address before the Oklahoma City Chamber of Commerce.

In commenting on the expiration of the Civilian Pilot Training Act on June 30 of this year, Mr. Stewart quoted Dr. Case, President of Colgate University, as stating "the civil aviation training program has established its claim to a permanent place in our thinking and planning for the future." Along this line, he reminded his listeners that the First National Clinic of Domestic Aviation Planning has adopted a resolution urging its continuance indefinitely.

Mr. Stewart pointed out that some of the features to be considered in a civilian flight training program for the present and future would include direct training for the War and Navy Departments and pilot training in conjunction with high schools and colleges.

"Let us by all means keep alive and active in our high schools and colleges and on our civilian flying fields an organization competent and equipped to make a sound working knowledge of flying techniques available to all of those who may in some way be called upon to employ that knowledge for the good of the nation," he declared.

### Revised CAR On Sale

Part 04, "Airplane Airworthiness" containing all amendments up to November 1, 1943, is now on sale at the Superintendent of Documents, Government Printing Office, Washington 25, D. C. The 54-page illustrated regulation may be purchased for 15¢ a copy.

## Stanton Urges Careful Planning Of City Projects

Cities should not be stampeded into burdening themselves with expensive, excessively large airports, C. I. Stanton, CAA Administrator, advised the Annual Conference of Mayors in Chicago recently.

"I think it would be well to place our planning emphasis on securing a number of airports in each urban area to serve varied types of flying, rather than concentrate on one terminal bigger and better than our neighbor city's," he said. According to Stanton, our biggest cities should plan on three or four commercial air terminals—on opposite sides of town—with schedules calling for alternate landings at each field for the convenience of everyone.

Airports serving as transoceanic terminals will need long runways, but 5,000-foot runways will be adequate for most American cities, he claimed. When selection of a site some distance from the city is necessary, thought should be given to an express highway so that an hour and a half saved by air won't be lost getting downtown or home, he warned.

In reviewing the means by which airports have been built and financed during the past 25 years, he pointed out that the CAA airport building program has made a substantial contribution not only to military aviation but to post-war air commerce. The necessity of deciding on a permanent, long-range policy for airports is a problem that still must be faced, however. He estimated that 6,000 airports will be needed within 5 years after the war in order to bring air service within range of all communities of over 1,000 population. An undertaking this huge calls for the joint efforts of Federal, State, and local governments and the pattern for such a partnership could be based on the method used in the building of our national highway system.

If Congress and the President authorize such a program, Mr. Stanton proposed that the funds appropriated be apportioned to the States by the CAA on the basis of a formula which would take into account four factors: (1) area of the State (2) its population (3) number of registered aircraft in the State, and (4) the existing number of accredited airports in the State. As in the Federal highway plan, each State would have to match a specified percentage of the United States funds allotted to it.

### U. S. War History

The work of compiling a CAA wartime history is in progress, and the Information and Statistics Service is asking CAA officials to dig into their files for any plans, directives, correspondence, records of achievement or other material which may be pertinent to the war effort. This material will form CAA's part in a war history of the U. S. Government.

# When Plane Nears Stall Point Low-cost CAA Device Warns Pilot

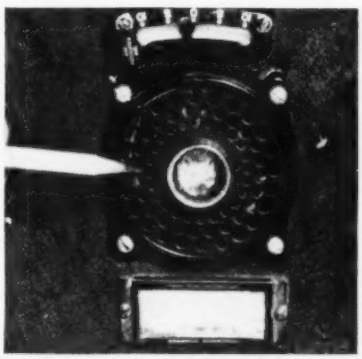
A safety mechanism which will warn a pilot when his plane is about to stall and thus help him avoid this No. 1 hazard to private flying has been developed by the Civil Aeronautics Administration.

Two low-cost models of this type of stall-warning instrument will be on the market in the near future, it was revealed at a recent meeting of the Institute of Aeronautical Sciences. More than half of all fatal private flying accidents are now caused by stalls, with the death toll exceeding 100 a year.

A third type which will warn airline pilots of impending stalls even when the wings are "iced up," is under development. The two devices already completed for private owners do not function under icing conditions, but of the 512 stall accidents to private aircraft during the last 3 years, only 5 involved icing, since private fliers generally stay on the ground in uncertain weather.

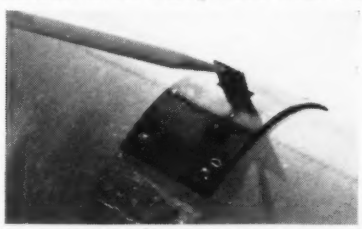
### Horn and Light Signal

The first practical instrument is being produced under contract with the CAA by the W. & L. E. Gurley Co., of Troy, N. Y. Another device has been developed at Wayne University, Detroit. Work on the air-carrier type instrument is being conducted for the CAA by the Westinghouse Electric & Manufacturing Co.



Installation of the horn-light stall warning unit on instrument panel (CAA-Gurley model).

In the two devices now ready, the pilot is warned of an approaching stall by the sounding of a horn and the flashing of a light. These signals are actuated in the Gurley model when the airplane reaches a certain angle and the air flow is reversed. This forces a vane which projects from the leading edge of the wing to move upward from its position in normal, thereby closing a switch.



Vane and attachment plate of CAA-Gurley stall warning indicator at leading edge of wing.

### Easily Installed

The Wayne unit is operated when pressure reversal sucks a diaphragm upward and forces an attached metal plate against electrical contacts. It has a cut-out button which can be pushed during take-offs and landings to eliminate horn noise when radio reception from a control tower is desired.


Pressure opening on leading edge of wing of the CAA-Wayne model.

The Westinghouse program is based on a warning being triggered by changes in the characteristics of the airflow over the top surface of the wing.

The units are easily installed in existing aircraft, are light in weight, and self-monitoring.

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## Philadelphia Does With One Carrier Service For Time Being

In a move to restore air mail service to Philadelphia, the Board issued an order January 11, authorizing All American Aviation to operate temporarily between that city and Washington, D. C., via Chester, Pa., and Wilmington, Del.

Philadelphia had been without air mail service since December 22, 1943, when the Board approved temporary suspension of all air carrier operations into the Philadelphia municipal airport, because of the hazards created by intensified military activities in the vicinity of that airport.

It is estimated that 200 pounds of Philadelphia mail will be dispatched by All American to Washington each evening and about 400 pounds of mail will be available for the morning service out of Washington.

The air carrier, which conducts a pick-up and delivery service for mail and express, will operate from the northeast airport in Philadelphia until regular air service to that city is resumed.

### What Do You Think of New Traffic Rules?

In an effort to shorten and simplify the "rules of the road" for the sky, the Civil Aeronautics Board has prepared a proposed new draft of air traffic rules and is inviting constructive criticism.

The proposed draft, which comprises a revision of the present set of traffic rules, known as part 60 of the Civil Air Regulations, appears on page 24 under the heading "Official Actions."

Besides endeavoring to cull them down to a minimum, the Board has tried to include only those regulations which guard others from danger, particularly collisions, and those which speed traffic. In preparing the new set, the Board has been guided by the proposition that the traffic rules should protect the lives and property of the public from careless flying rather than protect the pilot from his own carelessness.

One of the most important changes is the proposal, in place of many specific restrictions, of a regulation which merely forbids the careless operation of aircraft when it endangers the life and property of another person.

Criticisms should be sent to the Safety Bureau, CAB, Washington 25, D. C.

## Chicago & Southern Gets New Mail Rate

The Civil Aeronautics Board has ordered 0.3 mill per pound mile as the new rate of pay for the transportation of mail by Chicago and Southern Air Lines, effective from February 1, 1943, over the carrier's entire system between Chicago and New Orleans, and between Memphis and Houston.

The old rate of mail pay over different segments of Chicago and Southern's route varied from 22.5 cents, 26.5 cents, 35.5 cents, and 46 cents per airplane mile subject to certain operating conditions, the Board said. The new rate, computed on direct airport-to-airport mileage, will effect an estimated reduction in mail pay to Chicago and Southern of approximately $370,000 a year.

On the basis of its scheduled operations, the Board estimated an annual profit for the airline of $68,935, before mail pay and Federal income taxes.

Harllee Branch, Member, in dissenting from the majority, stated that the 0.3 mill mail rate for Chicago and Southern, as in other mail rate cases, included a substantial element of government subsidy and was therefore unsound. He declared that on the basis of present estimates, the commercial revenues together with mail revenues at the new rate will provide Chicago and Southern with an over-all net profit of 19 percent, after 40 percent Federal income taxes, on its total investment in scheduled air transportation.

## CAA Takes Steps To Reduce Traffic Delays

Mindful that the estimated cost of keeping a multimotor aircraft in the air is close to $100 an hour, the CAA Air Traffic Control division is continually working on improvements which will reduce delays in handling traffic. One of these improvements, tagged "local instrument control procedures," they are convinced, is speeding this handling.

Delays in landing during instrument weather cost aircraft operators over $80,000 the last fiscal year, according to a CAA estimate. A total of 21,213 instrument approaches were made within airway traffic control areas from July 1, 1942, to June 30, 1943. Delay time amounted to 805 hours and 12 minutes, or an average of 2.27 minutes for each approach.

Local instrument control procedures which are in practice at three airports, permit an airway traffic control center to delegate to an airport tower the job of directing arriving and departing aircraft.

This saves the time it takes to relay instructions from the center to the pilot through a third party, the communications channels. The center is not radio equipped; the tower is. When conditions warrant, direct contact between the tower controller and pilot can make short work of approach instructions.

Ordinarily the center originates the instrument approach instructions and retains control of the aircraft through outlying communications stations until the pilot can establish contact with the ground over the airport. The tower then takes over and directs the landing.

The new method, when combined with suitable radio navigation aids, permits successive aircraft to make approaches at intervals of 5 minutes in contrast to the usual time interval of 12 to 15 minutes.

When and to what extent a tower may originate approach instructions for the pilot is decided by the control center according the exigencies of the occasion.

Local instrument control procedures are now in effect in Kansas City, Mo., Atlanta, Ga., and Presque Isle, Maine.

### Global Army Radio Network Credited to CAA Assistance

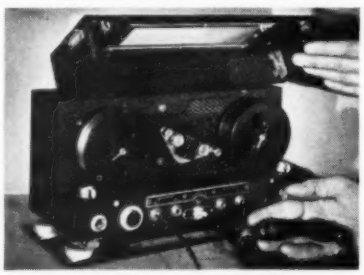
Writing in the November 1943 issue of Communications Magazine, Lt. Walter W. Fawcett, Jr., USAAF, credited the CAA with developing for the Army six intercontinental broadcasting stations, "among the most powerful radio installations in existence today." He stated, "Great credit is due the CAA for the outstanding cooperation given, principally along engineering and technical lines, in the development of the present colossal Army airways communications system."

According to Fawcett, the intercontinental stations collect and disseminate operational and weather information covering entire global areas.

## *Magnetic Wire Helps CAA Study Flight Instruction*

Plans of the CAA for study of student and instructor behavior in flight revolve around the wire recorder shown below.

The ability of the recorder to reproduce the exact words and recreate the exact atmosphere of nerve tension during an instruction session, coupled with the requirement that instructors follow verbatim standard "patter" in giving their lessons, makes possible the first scientific approach to the business of teaching persons to fly.



The machine records magnetically on a steel wire only four-thousandths of an inch in diameter. This tiny wire is fed through a simple grip where electrical energy rearranges the molecules of the wire to produce sound when the wire is fed through the playback. The playback can be accomplished on the same machine, and the machine will also erase the sound on the wire and leave it free for recording again on the same wire. This can be done again and again.

The wire runs approximately 5 miles to the pound and 2 hours of material can be recorded on a single pound. It costs about $10 for enough wire to record an hour of sound.

The first instrument available after the recorder was reduced to practicability was installed in a training plane to delve into a problem that existed at a certain school where some students were having difficulty in learning to spin and to recover from spins. When the wire was played back on the ground, the chief instructor found that one instructor reacted to the spin far more excitedly than was good for his students. He allowed his voice to rise in pitch and volume and literally scared the student into doing the maneuver incorrectly.

## Josh Lee Is Appointed To Board for Full Term

Josh Lee was sworn in January 17 for a full 6-year term as a member of the Civil Aeronautics Board.

On February 1, 1943, Lee was appointed by the President to fill the unexpired term of former CAB Vice Chairman, George P. Baker, who resigned to accept a position in the War Department.

## Factors Affecting Climb Of Transport Aircraft Covered in CAA Reports

To determine the exact effect of altitude, temperature, and weight on the rate of climb of transport airplanes with one engine inoperative, the CAA Flight Engineering and Factory Inspection Division has carried out studies of work done by many other agencies and has conducted many independent tests of its own. Three flight engineering reports, outlining the results of these studies have been published and are available free from the CAA Information and Statistics service.

They are "Airplane Climb Performance" (Report No. 3) which contains a general discussion and corrections for variations in atmospheric conditions, engine horsepower and airplane weight; "The Effect of Weight upon the Rate of Climb of an Airplane" (Report No. 10); and the most recent one "The Effect of Air Temperature upon the Rate of Climb of an Airplane Equipped with a Constant Speed Propeller" (Report No. 12).

The latter report shows that a temperature rise of 40° above the standard air temperature used in establishing airplane ceilings will result in a reduction of 85 feet a minute in the one engine out rate of climb of a DC-3 at sea level.

#### Unknown Quantities

Two other primary factors which seriously affect the rate of climb of an airplane—variations in piloting technique and the effect of turbulence—are still unknown quantities. This is believed to explain why pilots of large airplanes have often found that the actual performance of an airplane with one engine inoperative was different, and often disappointingly different, from the figures given by the CAA or by the manufacturer. All five of these causes or a combination of any of them may be encountered at one time.

#### Use of Controls Responsible

Some study has been made of the effect on climb of variations in pilot technique. Several expert test pilots have made saw-tooth climbs in smooth air with the same airplane and under conditions as nearly identical as possible and have encountered variations of approximately 90 feet per minute. Differences in the use of controls—moderate or excessive handling of elevators, ailerons, and rudder in holding the exact airspeed being used in the climb—are believed responsible for these variations.

The CAA advises that the total reduction in rate of climb of a transport airplane with one engine inoperative due to the factors of pilot technique, turbulent air, and temperatures in excess of standard can be as high as 400 feet a minute.

Little information is available on these factors, however, and the CAA is planning to carry out engineering work and extensive flight testing necessary to obtain definite figures on them as soon as war conditions permit.

# DOMESTIC AIR CARRIER STATISTICS

## *Operations for November 1943*

| Operator | Routes operated | Revenue miles flown | Revenue passengers carried [1] | Revenue passenger miles flown | Express carried (pounds) | Express pound-miles flown | Passenger seat-miles flown | Revenue passenger load factor (percent) |
|---|---|---|---|---|---|---|---|---|
| All American Aviation, Inc. | Pittsburgh-Jamestown, Huntington, Williamsport, Philadelphia, via Harrisburg. | 89,498 | 0 | 0 | 12,041 | 1,503,563 | 0 | ..... |
| American Airlines, Inc. | Dallas-Los Angeles | 634,237 | 13,416 | 11,257,808 | 162,198 | 161,676,882 | 12,074,468 | 93.24 |
| | New York-Chicago | 403,608 | 16,255 | 5,979,469 | 737,339 | 305,029,719 | 6,882,920 | 86.87 |
| | Boston-New York | 114,133 | 10,353 | 1,791,399 | 305,528 | 51,234,563 | 2,042,553 | 87.70 |
| | Boston-Cleveland | 17,237 | 1,500 | 223,357 | 37,080 | 6,984,251 | 331,143 | 67.45 |
| | Cleveland-Nashville | 59,156 | 4,663 | 1,036,188 | 70,957 | 17,444,903 | 1,224,540 | 84.62 |
| | New York-Fort Worth | 624,228 | 17,161 | 10,061,535 | 304,560 | 166,737,811 | 11,323,627 | 88.85 |
| | Washington-Chicago | 168,859 | 5,737 | 2,399,212 | 143,175 | 70,006,502 | 2,852,078 | 84.12 |
| | Chicago-Fort Worth | 106,271 | 3,785 | 1,758,078 | 85,573 | 55,449,809 | 1,994,750 | 88.14 |
| | Buffalo-Toronto | 4,256 | 575 | 43,700 | 3,168 | 240,768 | 88,160 | 49.57 |
| | El Paso or Ft. Worth-Mexico City | 126,446 | 1,768 | 1,740,712 | 15,667 | 15,924,466 | 2,226,329 | 78.19 |
| | Total | 2,258,431 | 75,213 | 36,291,458 | 1,865,245 | 850,729,674 | 41,040,568 | 88.43 |
| Braniff Airways, Inc. | Chicago-Dallas | 213,306 | 6,545 | 3,654,483 | 87,731 | 50,382,935 | 3,843,994 | 95.07 |
| | Denver-Brownsville | 153,091 | 8,797 | 2,503,797 | 29,848 | 8,172,379 | 2,749,134 | 91.08 |
| | San Antonio-Laredo | 7,800 | 624 | 93,600 | 740 | 102,860 | 156,000 | 60.00 |
| | Total | 374,197 | 15,966 | 6,251,880 | 118,319 | 58,658,174 | 6,749,128 | 92.63 |
| Chicago & Southern Air Lines, Inc. | Chicago-New Orleans | 143,422 | 5,885 | 2,517,808 | 58,568 | 25,072,241 | 2,941,694 | 85.59 |
| | Memphis-Houston | 31,765 | 1,510 | 499,244 | 9,411 | 4,055,644 | 646,040 | 77.28 |
| | Total | 175,187 | 7,395 | 3,017,052 | 67,979 | 29,127,885 | 3,587,734 | 84.09 |
| Continental Air Lines, Inc. | Denver-El Paso | 93,792 | 2,898 | 926,138 | 5,926 | 2,033,099 | 1,055,615 | 87.73 |
| | Pueblo-Tulsa | 36,690 | 1,538 | 330,085 | 2,752 | 678,064 | 393,597 | 83.86 |
| | Total | 130,482 | 4,436 | 1,256,223 | 8,678 | 2,711,163 | 1,449,212 | 86.68 |
| Delta Air Corporation | Charleston and Savannah-Fort Worth | 193,298 | 8,742 | 3,580,154 | 31,101 | 13,587,686 | 4,024,860 | 88.95 |
| | Atlanta-Cincinnati | 45,046 | 2,680 | 868,934 | 25,729 | 7,913,893 | 935,477 | 92.89 |
| | Total | 238,344 | 11,422 | 4,449,088 | 56,830 | 21,501,579 | 4,960,337 | 89.69 |
| Eastern Air Lines, Inc. | New York-San Antonio | 419,626 | 13,260 | 7,491,635 | 139,777 | 69,766,227 | 8,429,243 | 88.88 |
| | New York-Miami | 504,720 | 13,388 | 7,415,804 | 179,218 | 135,343,540 | 8,391,730 | 88.37 |
| | Chicago-Jacksonville | 168,842 | 7,557 | 3,120,516 | 83,420 | 36,156,934 | 3,335,162 | 93.56 |
| | Atlanta-Tampa | 25,740 | 1,397 | 480,288 | 10,149 | 3,698,982 | 540,332 | 88.89 |
| | Total | 1,118,928 | 35,602 | 18,508,243 | 412,564 | 244,965,683 | 20,696,467 | 89.43 |
| Inland Air Lines, Inc. | Denver-Great Falls | 47,104 | 1,047 | 333,064 | 1,934 | 277,443 | 511,019 | 65.18 |
| | Cheyenne-Huron | 26,918 | 0 | 0 | 228 | 65,270 | 0 | ..... |
| | Total | 74,022 | 1,047 | 333,064 | 2,162 | 342,713 | 511,019 | 65.18 |
| Mid-Continent Airlines, Inc. | Minneapolis-Tulsa | 90,286 | 2,742 | 784,067 | 10,530 | 2,480,356 | 1,151,571 | 68.09 |
| | Minneapolis-Des Moines, St. Louis and Kansas City. | 63,594 | 1,436 | 403,930 | 2,956 | 922,232 | 811,358 | 49.78 |
| | Total | 153,880 | 4,178 | 1,187,997 | 13,486 | 3,402,588 | 1,962,929 | 60.52 |
| National Airlines, Inc. | Jacksonville-Miami | 74,292 | 3,723 | 893,595 | 8,469 | 2,148,125 | 1,027,831 | 86.94 |
| | Jacksonville-New Orleans | 126,189 | 4,463 | 1,555,509 | 22,936 | 7,487,580 | 1,748,933 | 92.73 |
| | Total | 200,481 | 8,186 | 2,449,104 | 31,405 | 9,635,705 | 2,776,764 | 88.20 |
| Northeast Airlines, Inc. | Boston-Presque Isle and Moncton | 71,040 | 2,971 | 742,778 | 11,625 | 2,260,667 | 1,492,470 | 49.77 |
| Northwest Airlines, Inc. | Chicago-Seattle | 423,847 | 11,245 | 6,328,282 | 124,485 | 70,353,102 | 7,621,586 | 83.03 |
| | Minneapolis-Duluth | 5,720 | 0 | 0 | 779 | 11,397 | 0 | ..... |
| | Total | 429,597 | 11,245 | 6,328,282 | 125,264 | 70,364,499 | 7,621,586 | 83.03 |
| Pennsylvania-Central Airlines Corporation. | Norfolk-Detroit | 227,907 | 18,707 | 3,913,741 | 341,679 | 59,549,050 | 4,757,496 | 82.26 |
| | Detroit-Milwaukee | 14,734 | 1,471 | 231,612 | 20,492 | 3,541,716 | 309,414 | 74.86 |
| | Pittsburgh-Buffalo | 12,688 | 889 | 174,100 | 9,648 | 1,869,144 | 266,448 | 65.34 |
| | Pittsburgh-Birmingham | 38,520 | 1,609 | 538,758 | 6,620 | 2,261,538 | 808,920 | 66.60 |
| | Total | 293,849 | 22,676 | 4,858,211 | 378,439 | 67,221,448 | 6,142,278 | 79.09 |
| Transcontinental & Western Air, Inc. | New York-Los Angeles | 1,009,517 | 23,271 | 15,247,452 | 590,771 | 376,523,193 | 17,023,107 | 89.57 |
| | Dayton-Chicago | 29,064 | 1,970 | 469,910 | 55,985 | 12,382,310 | 552,241 | 85.09 |
| | Boulder City-San Francisco | 60,846 | 1,794 | 968,342 | 26,197 | 13,313,423 | 1,035,612 | 93.50 |
| | Kansas City-Pittsburgh via Chicago | 273,921 | 7,117 | 3,868,298 | 218,458 | 111,068,331 | 3,913,943 | 98.83 |
| | St. Louis-Detroit via Cincinnati and Dayton. | 63,580 | 4,142 | 949,836 | 57,107 | 10,443,290 | 1,253,489 | 75.78 |
| | Washington-Dayton via Columbus | 47,765 | 2,069 | 735,783 | 26,062 | 8,755,857 | 899,180 | 81.83 |
| | Total | 1,484,693 | 40,363 | 22,239,621 | 974,580 | 532,486,404 | 24,677,572 | 90.12 |
| United Air Lines Transport Corp. | New York-San Francisco | 1,477,226 | 22,759 | 21,365,174 | 799,546 | 623,362,131 | 22,691,271 | 94.16 |
| | Salt Lake-Seattle | 94,615 | 2,959 | 2,058,998 | 26,340 | 15,597,587 | 2,263,842 | 90.95 |
| | Seattle-San Diego | 382,823 | 17,988 | 7,017,441 | 112,066 | 46,882,426 | 7,511,072 | 93.43 |
| | Seattle-Vancouver | 10,191 | 1,191 | 156,515 | 3,268 | 410,779 | 199,202 | 78.57 |
| | Toledo-Washington | 47,280 | 1,190 | 829,348 | 10,363 | 4,083,022 | 947,215 | 87.56 |
| | Total | 2,012,135 | 46,087 | 31,427,476 | 951,583 | 690,335,945 | 33,612,602 | 93.50 |

See footnote at end of table.

## *Operations for November 1943*—Continued

| Operator | Routes operated | Revenue miles flown | Revenue passengers carried [1] | Revenue passenger miles flown | Express carried (pounds) | Express pound-miles flown | Passenger seat-miles flown | Revenue passenger load factor (percent) |
|---|---|---|---|---|---|---|---|---|
| Western Air Lines Inc. | San Diego-Salt Lake City | 163, 553 | 6, 429 | 2, 770, 983 | 77, 048 | 36, 913, 768 | 3, 313, 285 | 83. 63 |
| | Salt Lake City-Great Falls | 30, 804 | 800 | 341, 656 | 1, 556 | 591, 199 | 407, 102 | 83. 92 |
| | Great Falls-Lethbridge | 8, 434 | 336 | 53, 408 | 873 | 143, 607 | 106, 733 | 50. 04 |
| | Total | 202, 791 | 7, 565 | 3, 166, 057 | 79, 477 | 37, 648, 574 | 3, 827, 120 | 82. 73 |
| | **Grand Total** | **9, 307, 585** | **294, 352** | **142, 506, 534** | **5, 109, 677** | **2, 622, 896, 264** | **161, 107, 786** | **88. 45** |

[1] Where a company operates more than one route, the passengers carried may be duplicated between routes.
Passengers carried (total revenue and nonrevenue) 301,253; passenger miles flown (total revenue and nonrevenue) 145,104,815.

## *Operations for the first eleven months of 1943 as compared with the same period of 1942*

| Operator | Revenue miles flown January–November | | Revenue passengers carried January–November | | Revenue passenger miles flown January–November | |
|---|---|---|---|---|---|---|
| | 1943 | 1942 | 1943 | 1942 | 1943 | 1942 |
| All American Aviation, Inc. | 946, 243 | 780, 946 | 0 | 0 | 0 | 0 |
| American Airlines, Inc. | 24, 189, 569 | 25, 825, 580 | 848, 900 | 945, 344 | 401, 894, 595 | 374, 344, 991 |
| Braniff Airways, Inc. | 3, 707, 193 | 4, 028, 828 | 157, 721 | 140, 506 | 60, 943, 404 | 46, 683, 455 |
| Catalina Air Transport | 0 | 41, 924 | 0 | 8, 684 | 0 | 260, 520 |
| Chicago & Southern Air Lines, Inc. | 2, 010, 646 | 2, 043, 928 | 81, 314 | 69, 352 | 32, 568, 143 | 26, 366, 530 |
| Continental Air Lines, Inc. | 1, 417, 485 | 1, 529, 198 | 48, 664 | 34, 780 | 13, 792, 581 | 9, 312, 231 |
| Delta Air Corporation | 2, 114, 861 | 2, 232, 179 | 104, 540 | 100, 578 | 39, 200, 367 | 30, 852, 911 |
| Eastern Air Lines, Inc. | 12, 121, 231 | 15, 300, 697 | 374, 819 | 457, 261 | 197, 577, 724 | 204, 650, 777 |
| Inland Air Lines, Inc. | 775, 541 | 937, 727 | 11, 339 | 10, 657 | 3, 661, 021 | 3, 042, 045 |
| Mid-Continent Airlines, Inc. | 1, 318, 807 | 1, 444, 135 | 33, 970 | 26, 146 | 9, 434, 398 | 7, 111, 550 |
| National Airlines, Inc. | 1, 732, 894 | 1, 416, 302 | 68, 944 | 50, 618 | 20, 793, 014 | 14, 055, 229 |
| Northeast Airlines, Inc. | 647, 295 | 745, 424 | 32, 922 | 25, 059 | 8, 216, 887 | 5, 053, 835 |
| Northwest Airlines, Inc. | 4, 006, 423 | 4, 417, 586 | 109, 185 | 105, 765 | 56, 863, 228 | 49, 244, 367 |
| Pennsylvania-Central Airlines Corporation | 2, 805, 716 | 3, 925, 918 | 222, 297 | 251, 570 | 47, 458, 026 | 52, 346, 027 |
| Transcontinental & Western Air, Inc. | 14, 892, 223 | 15, 461, 268 | 408, 307 | 378, 305 | 223, 926, 846 | 188, 894, 007 |
| United Air Lines Transport Corporation | 19, 899, 576 | 20, 485, 129 | 497, 514 | 479, 287 | 325, 460, 407 | 269, 458, 273 |
| Western Air Lines, Inc. | 1, 864, 238 | 2, 194, 559 | 74, 128 | 69, 711 | 29, 597, 924 | 22, 909, 539 |
| Total | 94, 449, 941 | 102, 811, 328 | 3, 074, 564 | 3, 153, 623 | 1, 471, 388, 565 | 1, 304, 586, 287 |
| Index (1942=100) | 91. 87 | 100. 00 | 97. 49 | 100. 00 | 112. 79 | 100. 00 |

| Operator | Express carried (pounds) January–November | | Express pound-miles flown January–November | | Passenger seat-miles flown January–November | | Revenue passenger load factor (percent) January–November | |
|---|---|---|---|---|---|---|---|---|
| | 1943 | 1942 | 1943 | 1942 | 1943 | 1942 | 1943 | 1942 |
| All American Aviation, Inc. | 139, 765 | 100, 907 | 19, 060, 382 | 10, 910, 788 | 0 | 0 | | |
| American Airlines, Inc. | 19, 030, 666 | 10, 743, 557 | 8, 879, 201, 669 | 5, 375, 158, 273 | 455, 634, 081 | 505, 325, 432 | 88. 21 | 74. 08 |
| Braniff Airways, Inc. | 1, 284, 708 | 937, 779 | 648, 523, 291 | 355, 585, 399 | 66, 349, 701 | 70, 098, 111 | 91. 85 | 66. 60 |
| Catalina Air Transport | 0 | 64, 088 | 0 | 2, 011, 530 | 0 | 379, 320 | | 68. 68 |
| Chicago & Southern Air Lines, Inc. | 787, 416 | 611, 546 | 342, 120, 569 | 244, 792, 027 | 38, 779, 240 | 42, 668, 672 | 83. 98 | 61. 79 |
| Continental Air Lines, Inc. | 108, 033 | 102, 637 | 37, 700, 750 | 31, 117, 282 | 15, 877, 102 | 15, 839, 065 | 86. 87 | 58. 79 |
| Delta Air Corporation | 548, 837 | 271, 575 | 211, 025, 084 | 100, 573, 156 | 44, 189, 686 | 42, 024, 077 | 88. 71 | 73. 42 |
| Eastern Air Lines, Inc. | 4, 078, 821 | 3, 695, 480 | 2, 497, 315, 145 | 2, 254, 895, 599 | 226, 451, 802 | 293, 970, 583 | 87. 25 | 69. 62 |
| Inland Air Lines, Inc. | 23, 437 | 38, 165 | 5, 406, 371 | 7, 106, 107 | 5, 508, 429 | 8, 571, 901 | 65. 75 | 35. 49 |
| Mid-Continent Airlines, Inc. | 159, 495 | 105, 981 | 38, 769, 401 | 25, 258, 564 | 15, 024, 989 | 15, 681, 713 | 62. 79 | 45. 35 |
| National Airlines, Inc. | 306, 273 | 203, 165 | 89, 423, 230 | 56, 332, 246 | 24, 116, 959 | 19, 266, 684 | 86. 22 | 72. 95 |
| Northeast Airlines, Inc. | 106, 034 | 81, 317 | 21, 592, 017 | 21, 277, 075 | 13, 585, 442 | 14, 152, 852 | 60. 48 | 35. 71 |
| Northwest Airlines, Inc. | 1, 391, 668 | 1, 036, 431 | 904, 636, 663 | 785, 088, 374 | 67, 897, 578 | 75, 413, 867 | 83. 75 | 65. 30 |
| Pennsylvania-Central Airlines Corporation | 3, 927, 992 | 2, 237, 169 | 708, 474, 883 | 436, 159, 607 | 58, 339, 485 | 79, 638, 961 | 81. 35 | 65. 73 |
| Transcontinental & Western Air, Inc. | 9, 754, 320 | 6, 522, 501 | 5, 509, 280, 784 | 4, 248, 019, 959 | 250, 126, 230 | 266, 273, 349 | 89. 53 | 70. 94 |
| United Air Lines Transport Corporation | 9, 536, 325 | 8, 506, 995 | 7, 176, 516, 908 | 6, 844, 771, 614 | 353, 954, 148 | 329, 816, 954 | 91. 95 | 81. 70 |
| Western Air Lines, Inc. | 867, 345 | 1, 208, 517 | 395, 572, 227 | 544, 045, 267 | 34, 744, 240 | 37, 159, 011 | 85. 19 | 61. 65 |
| Total | 52, 051, 135 | 36, 467, 810 | 27, 484, 619, 374 | 21, 343, 102, 867 | 1, 670, 639, 112 | 1, 816, 281, 482 | 88. 07 | 71. 83 |
| Index (1942=100) | 142. 73 | 100. 00 | 128. 78 | 100. 00 | 91. 98 | 100. 00 | 122. 61 | 100. 00 |

| | January | February | March | April | May | June | July | August | September | October | November | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Passengers carried [1] | 208, 380 | 233, 049 | 265, 175 | 280, 913 | 282, 103 | 297, 760 | 320, 096 | 338, 059 | 321, 616 | 322, 099 | 301, 253 | 3, 170, 503 |
| Passenger miles flown [1] | 101, 410, 602 | 110, 982, 551 | 124, 256, 467 | 132, 984, 531 | 133, 266, 615 | 140, 745, 710 | 150, 013, 387 | 156, 873, 457 | 153, 980, 314 | 155, 855, 938 | 145, 104, 815 | 1, 505, 474, 387 |

[1] Total revenue and nonrevenue.

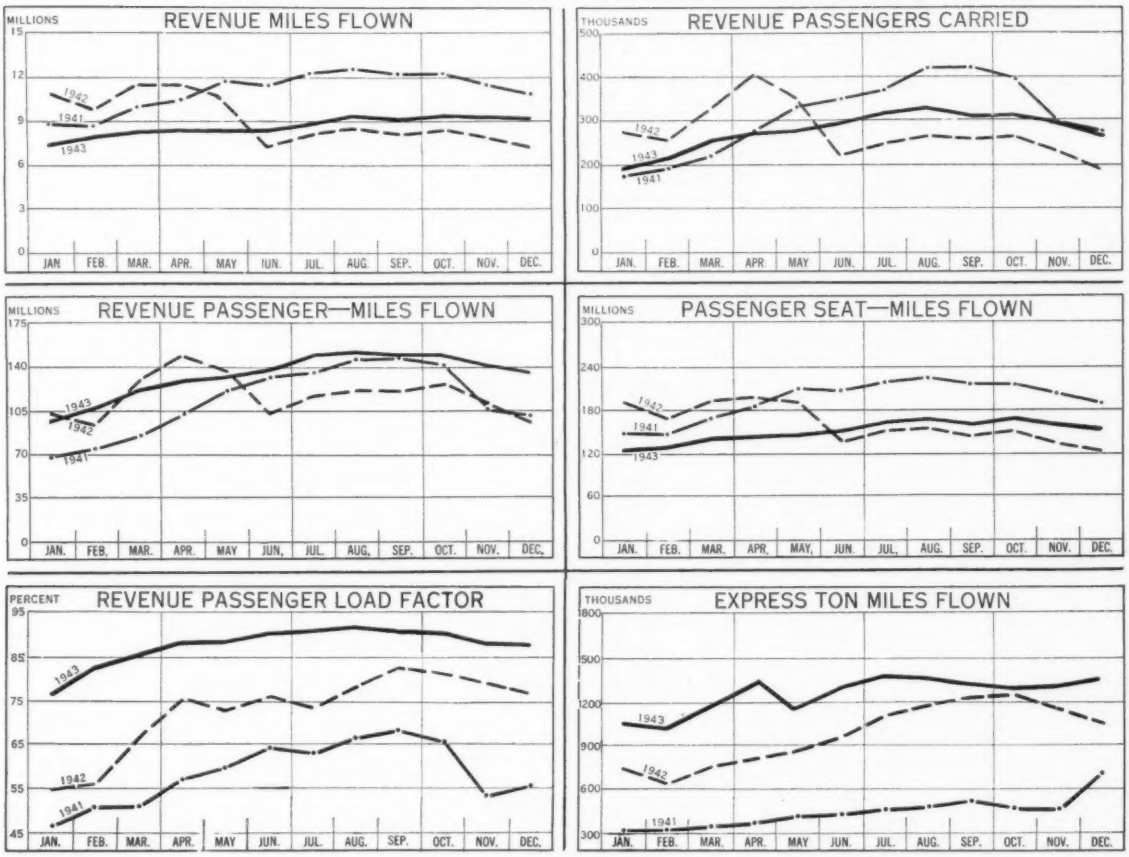
## Digest of Regulations

The 7th edition of Bulletin No. 22, "Digest of Civil Air Regulations for Pilots," is now available from the Superintendent of Documents, Government Printing Office, Washington 25, D. C. The illustrated booklet sells for 20¢ a copy and contains 74 pages.


## 5,175 Accidents

The number of reported civilian accidents increased from 4,493 for the fiscal year 1942 (July 1, 1941–June 30, 1942) to 5,715 for fiscal 1943. These figures include accidents on the ground and mishaps, even though there was no personal injury and little aircraft damage.

## *Comparative Charts of Domestic Operations for 1941, 1942, 1943*




## Accidents

*(Continued from back cover)*

enrolling for this training. The aircraft, a Taylorcraft BL, was demolished.

Instructor Thorell and Student Payne took off from the New Orleans Airport to practice maneuvers in an area 5 miles southeast of the airport. Forty minutes later, the student put the plane into a spin at an altitude of 2,500 feet. After completing two turns of a right spin, left rudder was applied to effect recovery, at which time the occupants heard a snapping sound and the rudder controls became slack and ineffective. The spin continued and partial recovery was effected just before the plane crashed nose-first in a swamp.

Examination of the wreckage revealed that the left rudder cable was badly frayed in the area of travel on the pulley and as a result had parted at a point 10 inches from the rudder pedal. The pulley and adjacent portion of the cable were covered by a metal guard plate, which had to be removed before inspection of this part of the control system could be accomplished. This evidently had not been done in periodic inspections. The aircraft was about 4 years old and its log showed approximately 2,622 hours of flying time.

The instructor stated, "After about two turns of the spin had been completed, the student attempted recovery. I took the controls and attempted to assist in stopping the spin. At this time there was a loud snap like something breaking." Investigation disclosed that after the cable failed, both the instructor and the student were on the controls attempting recovery. Both instructor and student were equipped with parachutes but neither had tried to jump.

While poor maintenance and lack of proper inspection were contributing factors, the direct cause of this accident was failure of the left rudder control cable during an attempt to recover from an intentional spin.

## Airline Mileage Up; Accidents Down in 1943

The domestic airlines came through 1943 with only 2 fatal accidents and 23 passenger fatalities, a record for safe flying which has been unequalled since 1939.

The 16 passenger-carrying airlines in the United States flew approximately 1,650,000,000 passenger miles. This averaged about 1.4 passenger fatality for every 100,000,000 passenger miles flown.

## CAB May Permit Heavier Loads For Airliners

Revision upward of loads now permitted commercial aircraft is a current issue before the Civil Aeronautics Board. Proposed amendments to increase the operating weights now allowed by the CAR's was discussed at a public hearing held February 8.

Under consideration is the advisability of increasing the take-off weight of the DC-3 commercial transport plane by 1,000 pounds and its landing weight by 800 pounds. A 1,000-pound increase of both the landing and take-off weight of the Lockheed Lodestar transport model was also discussed. These proposals apply specifically to Douglas and Lockheed transport aircraft equipped with Wright G-202 or Pratt & Whitney S1C3G engines.

The Board's proposed amendments would affect parts 04 and 61 which restrict the maximum landing and take-off weights for Douglas DC-3 commercial transports to 24,400 pounds and 25,200 pounds.

## PROPOSED AIR TRAFFIC RULES

### GENERAL FLIGHT RULES

*60.01 Airspace restrictions.* Flight of aircraft in the following areas involves special restrictions or considerations: (a) *Caution area.* An area designated by the Administrator in which a visible hazard to aircraft in flight exists. Flight in this area should be avoided if practicable. (b) *Danger area.* An area designated by the Administrator in which an invisible hazard to aircraft in flight exists. Aircraft must not be flown in such an area without specific authority issued by the agency having jurisdiction. (c) *Prohibited area.* An area established by Executive Order of the President of the United States. Aircraft must not be flown in such an area except aircraft actually engaged in defense missions, or otherwise in accordance with the Executive Order establishing such areas.

*Note.—Restricted areas are indicated on aeronautical charts and published in Weekly Notice to Airmen, issued by the Administrator of Civil Aeronautics.*

*60.02 Traffic control instructions.* A pilot must adhere to traffic control instructions received from an airway traffic control center or an air traffic control tower of the Administrator.

*60.020 Suspension of air traffic.* An airway traffic control center or air traffic control tower of the Administrator for reasons of public safety may temporarily suspend any or all flight in a control area.

*60.03 Reckless flying.* No person shall pilot an aircraft in a reckless or negligent manner so as to endanger the life or property of another.

*60.04 Right-of-way rules.* (a) *Order.* Aircraft in flight have the right-of-way in the following order: (1) balloons, fixed or free (an airship not under control is classed as a free balloon), (2) gliders, (3) airships, and (4) airplanes, including rotor planes; (b) *Crossing.* When two aircraft are on crossing courses at approximately the same altitude, the aircraft which has the other on its left shall have right-of-way, and the other aircraft must give way; (c) *Approaching head-on.* When two aircraft are approaching head-on, or approximately so, and there is danger of collision, each must alter its course to the right so that they will pass each other at a safe distance; (d) *Overtaking.* An overtaken aircraft has the right-of-way and the overtaking aircraft must alter its course to the right so as to keep clear of the other aircraft; (e) *Landing.* An aircraft while landing or maneuvering in preparation to land has the right-of-way over other aircraft in flight, or on the ground or water. Aircraft at a higher altitude not in an established traffic pattern must give way to an aircraft at a lower altitude; (f) *Distress landing.* An aircraft in distress has the right-of-way in attempting to land.

*60.05 Right side traffic.* Aircraft operating along a civil airway must keep to the right of the radio range course projected along the airway, or, if no radio range course is projected along the airway, must keep to the right of the center line of the airway, except: (a) when impracticable for reasons of safety; (b) when otherwise instructed or authorized by an airway traffic control center of the Administrator; (c) inbound aircraft operating on instruments and using the on-course signal of the radio range; or (d) when landing or taking off.

*60.050 Crossing range approach channel.* Aircraft crossing a range approach channel must give way to aircraft proceeding along and within the range approach channel, and in addition, aircraft when crossing a range approach channel more than 1,500 feet above the ground or water must do so at a constant altitude and at an angle of not less than 45°.

*60.06 Aircraft lights.* Between sunset and sunrise: (a) aircraft parked or moved within a lighted landing area must display sufficient lights to mark the location of the aircraft unless otherwise illuminated; (b) seaplanes on the water must display the lights required by the regulations of the United States governing the navigation of vessels on the water; and (c) aircraft in flight must display position lights.

*60.07 Distress signals.* Signals used in case of distress must, where practicable, be as follows: (a) S O S for radiotelegraphy; (b) MAYDAY for radiotelephony. (When, owing to the rapidity of the maneuvers to be accomplished, an aircraft is unable to transmit the intended message, the signal P A N not followed by a message retains such meaning); (c) NC for international code flag signals of distress; and (d) A square flag having either above or below it a ball, or anything resembling a ball.

*60.08 Fog signals.* In fog, mist, or heavy weather, an aircraft on the water in navigation lanes must signal its presence by a sound device emitting a signal for about 5 seconds at 1-minute intervals.

*60.09 Emergency rules.* The air traffic rules do not apply to emergency situations where immediate action is required to avoid danger which could not have been reasonably foreseen, unless the emergency situation shall be found to have been caused by the carelessness or intentional acts of the pilot.

### CONTACT FLIGHT RULES

*60.1* In addition to the preceding general rules, the following rules govern flight when the attitude of the aircraft and its flight path can at all times be controlled by means of visual reference to the ground or water:

*60.10 Weather minimums.* Flight under contact flight rules may be made only if there is a ceiling of at least 1,000 feet and visibility of at least 3 miles except when made in a control zone and cleared by the air traffic control tower.

*60.11 Weather changes.* If weather conditions below the minimum prescribed are anticipated or are encountered enroute, a landing must be made as quickly as practicable or the course of the flight altered so that it may be made in contact flight weather unless such flight can and does proceed in accordance with the instrument flight rules.

*60.12 Flights in the vicinity of landing areas.* Flights in the vicinity of landing areas must comply with the following rules: (a) Aircraft approaching for a landing must comply with the established traffic pattern or circle the landing area sufficiently to observe other traffic, unless other instructions are received from the air traffic control tower; (b) Aircraft taking off from a landing area must conform to the established traffic pattern, if any; (c) All other aircraft flying below 1,500 feet must deviate to the right sufficiently to avoid at a safe distance flights under (a) and (b) above; and (d) All turns when approaching for a landing or after take-off must be to the left unless otherwise directed by an air traffic control tower or unless the Administrator has prescribed a different procedure for the landing area.

### INSTRUMENT FLIGHT RULES

*60.2* Flight under the following conditions must be made according to instrument flight rules: (a) in weather conditions in which the visibility is less than 3 miles or the ceiling less than 1,000 feet; or (b) in closer proximity than 500 feet vertically or 2,000 feet horizontally to a cloud formation; or (c) whenever the altitude of the aircraft and its flight path cannot be controlled at all times by visual reference to the ground or water.

*60.21 Fuel requirements.* Sufficient fuel and oil, considering the wind and other weather conditions forecast, must be carried: (a) to complete the flight to the point of the first intended landing; and, thereafter, (b) to fly to and land at an alternate airport designated in the approved flight plan; and, thereafter, (c) to fly, at normal cruising consumption, for a period of 45 minutes.

*60.22 Alternate airport.* At least one alternate airport must be specified in the flight plan where the weather reports and forecasts indicate the weather conditions are and will remain, until time of expected arrival, at or above a ceiling of 1,000 feet and visability of 3 miles.

*60.23 Instrument flight plan.* Prior to take-off from any point within an airway traffic control area and prior to entering such an area, an approved flight plan must be filed with the airway traffic control center of the area in which the flight originates. No flight plan shall be submitted until after the pilot has made a careful study of available current weather reports and forecasts and believes the flight can be made with safety. Such flight plan must contain the following information: (a) the aircraft identification mark; (b) the type of aircraft involved and the number of aircraft making the flight, if the aircraft are in formation and on only one flight plan; (c) the name of the pilot, or if in formation the name of the flight commander; (d) the point of departure; (e) The cruising altitude or altitudes and the route to be followed; (f) the point of first intended landing; (g) the cruising airspeed; (h) transmitter frequency; (i) the time of departure; (j) the estimated elapsed time until arrival on the ground at the point of first intended landing; (k) the alternate airport or airports; and (l) any other pertinent information which the pilot deems useful for control purposes or which may be requested by an airway traffic control center.

*60.230 Flight plan changes.* A change must not be made en route in any approved flight plan until approval has first been obtained from the airway traffic control center of the Administrator for the area in which the flight is progressing, unless an emergency situation arises which requires immediate decision and action, in which case, as soon as possible after such emergency authority is exercised, the pilot must inform the proper control center of the new flight plan and obtain approval therefor.

*60.231 Notification of arrival.* If the pilot of an aircraft has submitted, or authorized the submission of, a flight plan, he must, immediately upon landing or upon completion of the flight, file an arrival notice for transmission to the point of departure.

*60.24 Weather minimums.* A flight must not be made to or from any airport or landing area when the ceiling is less than 500 feet or the visibility is less than one mile unless cleared by an air traffic control tower operator of the Administrator on duty in such area.

*60.25 Weather changes.* If weather reports available to the pilot en route indicate that the weather conditions will be below 500 feet or 1 mile at the airport of destination at the expected time of arrival, the pilot must proceed to an alternate airport where the ceiling and visibility expected to prevail on arrival are at least 1,000 feet and 3 miles, respectively.

*60.26 Communication contacts.* The pilot must maintain a continuous listening watch on the appropriate radio frequency and must, by radio, contact and report as soon as possible to the appropriate communication station the time and altitude of passing each radio fix or other check point designated by the Administrator or specified in the flight plan together with unanticipated weather conditions being encountered and any other information pertinent to the aircraft movement.

*60.260 Communication facilities.* Aircraft utilizing air carrier communication facilities must transmit information as required in this paragraph through such facilities, or such information may be transmitted directly by radio, to the appropriate agency of the Administrator.

*Note.—For further information concerning aids to air navigation, see Air Navigation Radio Aids, published periodically by the Administrator of Civil Aeronautics.*

*60.261 Communication failure.* In the event of inability to maintain two-way communication with the appropriate communication station, one of the following procedures must be observed: (a) Proceed in accordance with contact flight rules; or (b) Land as soon as practicable; or (c) Proceed according to the approved flight plan, including any amended instructions issued and acknowledged en route, maintaining the last acknowledged assigned altitude until the approach time last authorized at which time a landing may be made.

*Note.—Normal traffic will resume as soon as the aircraft has landed or been accounted for, but in any event in not more than 30 minutes after the approach time last authorized for the aircraft and acknowledged by the pilot of such aircraft.*

*60.27 Flight altitudes.* Unless different altitudes are assigned by an airway traffic control center of the Administrator, the fol-

*(See Proposed Rules page 27)*

# Civil Aeronautics Board

## Airline Orders

### Re Service

**No. 2612,** issued December 31, 1943, consolidated into one proceeding and assigned for hearing applications of various airlines for certificates and amendment of existing certificates proposing additional air transportation service in the general area between *Milwaukee* and *Chicago* and *New York*. **No. 2613,** issued January 1, 1944, granted permission to *EAL* for expeditious use of Owens Field so as to serve *Columbia, S. Car.* **No. 2615,** issued January 1, 1944, authorized inauguration of service by *EAL* at the intermediate point *Lake Charles, La.*, on route 5. **No. 2624,** issued January 7, 1944, denied petition of *EAL* for reconsideration of Order 2569 which granted *W. R. Grace & Co.* permission to intervene re applications for certificates authorizing additional air service in *Mexico, Central and South America, and the Caribbean.*

**No. 2629,** issued January 13, 1944, denied motion of *National Airlines, Inc.*, for leave to file a reply to the memorandum of position of Public Counsel re applications of *National* and *EAL* for certificates. **No. 2630,** issued with an opinion January 14, 1944, amended certificate of *National Airlines, Inc.*, regarding certain air transportation in the state of *Florida;* directed them to file monthly reports re their operation to and from *Key West* and withheld same from public disclosure; denied application of the airline in all other respects; denied application of *EAL*. **No. 2636,** issued January 19, 1944, dismissed applications of *Delta Air Corporation* for certificate and amendments of existing certificates.

**No. 2637,** issued January 19, 1944, granted *Braniff Airways, Inc.*, permission to intervene re application of American Air Lines, Inc., to include *San Antonio, Tex.*, as an intermediate point between Monterrey, Mex., and Ft. Worth-Dallas, Tex., on its route 26. **No. 2638,** issued January 19, 1944, granted *EAL* permission to intervene re application of American Airlines, Inc., to include *San Antonio* as an intermediate point between Monterrey, and Ft. Worth-Dallas, on its route 26. **No. 2641** issued January 20, 1944, denied motion of *Braniff* requesting postponement of hearing re application of American Air Lines, Inc., to include *San Antonio* as an intermediate point between Monterrey and Ft. Worth-Dallas, on its route 26.

**No. 2639,** issued with an opinion January 17, 1944, amended certificate which authorized *National Airlines, Inc.*, to engage in air transportation over route 31 so that the intermediate point Sarasota, Fla., is redesignated *Sarasota-Bradenton, Fla.* **No. 2640,** issued January 20, 1944, denied petition of the Board of Commissioners of *Pinellas County, Fla.*, for leave to intervene re hearing of the application of *National*, Docket No. 1168, for certificates authorizing additional air transportation to Mexico, Central and South America, and the Caribbean. **No. 2644,** issued January 24, 1944, granted *Braniff Airways, Inc., Continental Air Lines, Inc.*, and *Mid-Continent Airlines, Inc.*, permission to intervene re application of *TWA* for amendment of its certificate. **No. 2645,** issued January 24, 1944, dismissed applications of *Braniff*, Docket 469, and that portion of its application in Docket 196 involving a proposed route between *Memphis, Tenn.* and *Atlanta, Ga.*

**No. 2646,** issued January 26, 1944, granted the *City of Detroit* and denied the Detroit Board of Commerce permission to intervene re application of certain airlines for certificates. **No. 2647,** issued January 26, 1944, granted permission to the *Port of New York Authority* to intervene re applications of certain airlines for certificates. **No. 2648,** issued January 26, 1944, denied petition of *EAL* for permission to intervene re applications of certain airlines for certificates. **No. 2649,** issued January 26, 1944, granted permission to the *State of Ohio* by its Attorney General and the *State of Connecticut*, by its State Development Comm., to intervene re applications of *UAL* and *TWA* for certificates.

**No. 2650,** issued January 26, 1944, granted permission to the *City of Cleveland* and the *City of Cambridge* to intervene re applications of *UAL* and *TWA* for certificates. **No. 2651,** issued January 26, 1944, denied petitions of the Cleveland, Hartford and Boston Chambers of Commerce, to intervene re applications of *UAL* and *TWA* for certificates. **No. 2656,** issued January 26, 1944, extended for 3 months temporary permit held by *KLM* for additional foreign air transportation in the *Caribbean area.* **No. 2657,** issued January 28, 1944, extended for 3 months temporary permit held by *Expreso Aereo Inter-Americano, S. A.*, for additional foreign air transportation in the *Caribbean area.*

### Re Mergers and Control

**No. 2614,** issued January 1, 1944, denied petition of *E. W. Wiggins Airways, Inc.*, for reconsideration and modification of Order 2557 re petition of Northeast Airlines, Inc., for approval by the Board of the transfer of the certificate and the purchase and merger of the properties of *Mayflower Airlines, Inc.*, **No. 2619,** issued January 4, 1944, granted permission to the *Department of Justice* to intervene re application of Hughes Tool Co. for approval by the Board of control of *TWA*. **No. 2633,** issued January 6, 1944, granted permission to *Woodley Airways* to intervene re applications of Alaska Airlines, Inc., and Cordova Air Service, Inc., for approval of the purchase by Alaska Airlines, Inc., of the property and business of *Cordova Air Service, Inc.*, and the transfer of the certificate held by Cordova to Alaska Airlines.

### Re Exemptions

**No. 2625,** issued January 11, 1944, temporarily exempted *All American Aviation, Inc.*, from certain provisions of the Civil Aeronautics Act and the Economic Regulations of the Board which would otherwise prevent them from engaging in air transportation between Northeast Airport, *Philadelphia* and National Airport, *Washington, D. C.*, via Chester, Pa., and Wilmington, Del., during the period in which regular air service to Philadelphia is suspended; such order shall cease to be effective upon the resumption of regular air transportation to Philadelphia. **No. 2643,** issued January 21, 1944, temporarily exempted *Colonial Airlines, Inc.*, from the provisions of Sec. 401 (a) of the Civil Aeronautics Act of 1938, insofar as they would otherwise prevent them from engaging in air transportation to and from *Massena, N. Y.* on its route between New York, N. Y., and Montreal, Canada.

## Airman Orders

### Re Suspensions

**No. 2616,** issued January 3, 1944, suspended for 60 days private pilot certificate of *William A. Fleming* because he flew a landplane within 500 feet of the water. **No. 2617,** issued January 3, 1944, suspended for 30 days student certificate of *Laurence E. Brennan* for flying a plane within 500 feet of the ground. **No. 2618,** issued with an opinion January 26, 1944, suspended for 30 days private certificate of *Edward A. Kapinski* for flying at night without lights. **No. 2620,** issued January 5, 1944, suspended for 90 days student certificate of *Dale K. Tolbert* for unauthorized flight at low altitude over a town, during which he flew too close to another plane.

**No. 2621,** issued January 5, 1944, suspended until he passes a written and practical examination, mechanic certificate of *Harold M. Fitzgerald* because he certified a plane as airworthy when in fact it was not. **No. 2626,** issued January 17, 1944, suspended for 6 months student certificate of *James W. Watt* for carrying a passenger in a plane with dual controls. **No. 2633,** issued January 19, 1944, suspended for 15 days private certificate of *William E. Lovett* for giving flight instruction. **No. 2634,** issued January 19, 1944, dismissed farmer's complaint against *Edwin A. Horanic*, holder of student certificate. Board found that Horanic flew low over a farm while approaching for a landing.

**No. 2635,** issued January 19, 1944, amended Order 609–722 re *John Barnett*, holder of commercial pilot certificate with flight instructor rating, so as to permit his giving instruction to Navy students. **No. 2652,** issued January 26, 1944, suspended for 90 days private certificate of *Daniel J. Holihan* because he had operated a plane in furtherance of a business. **No. 2653,** issued January 26, 1944, suspended for 6 months student certificate of *Joe K. Coleman, Jr.*, for flying a plane within 500 feet of the ground.

**No. 2654,** issued January 26, 1944, suspended for 90 days private certificate of *Calvin S. Akers* for carrying a passenger on a flight for which he had not obtained proper clearance in a plane of greater hp. than that for which he was rated. **No. 2655,** issued January 26, 1944, suspended for 30 days commercial certificate of *Robert P. Lehr* for flying a plane within 500 feet of the ground.

### Re Revocations

**No. 2622,** issued January 5, 1944, revoked student certificate of *Harry R. Reeves* for carrying a passenger. **No. 2627,** issued January 17, 1944, revoked flight instructor rating of *Bruce MacArthur* for flying a plane at low altitude over a town and for, on the same flight, performing reckless antics over some wires. **No. 2628,** issued January 17, 1944, revoked student certificate of *Allen J. O'Hara* for making an unauthorized parachute jump without an auxiliary parachute. **No. 2631,** issued January 18, 1944, amended Order 609–634 so as to allow *Andy Covic* to apply for any pilot certificate for which he may be eligible on or before January 10, 1944. **No. 2632,** issued January 19, 1944, revoked student certificate of *George W. Finger* because as owner of a plane he authorized it to be flown while overloaded.

### Re Waivers

**No. 2642,** issued January 21, 1944, denied petition of *David A. Ohlwiler* which asked for a waiver of Sec. 21.10 of the Civil Air Regulations.

## Regulations

Reg. 297_____ *Effective Jan. 1, 1944*

Notwithstanding § 40.2611 (b) of the Civil Air Regulations, any first pilot listed in American Airlines, Inc., air carrier operating certificate on January 1, 1944, who is qualified as competent to operate an aircraft in scheduled air transportation between Nashville or Memphis and Dallas or Fort Worth on January 1, 1944, may pilot aircraft in scheduled operations for said carrier into and out of Texarkana Airport, Texarkana, Ark., upon furnishing evidence satisfactory to the Administrator showing that the pilot is thoroughly familiar with the form and condition of the airport and with the location and nature of any obstructions in the vicinity.

Reg. 298_____ *Effective Jan. 1, 1944*

Special Civil Air Regulation Serial Number 278 is amended by striking the words "December 31, 1943" and inserting in lieu thereof the words "June 30, 1944."

Reg. 299_____ *Effective Jan. 15, 1944*

Notwithstanding § 40.2611 (b) of the Civil Air Regulations any first pilot listed in the American Airlines, Inc., air carrier operating certificate on January 15, 1944, who is qualified as competent to operate an aircraft in scheduled air transportation between St. Louis, Mo., and Tulsa, Okla., on January 15, 1944, may pilot aircraft under day contact operations in scheduled transportation for said carrier into and out of Joplin Airport, Joplin, Mo., upon furnishing evidence satisfactory to the Administrator showing that the pilot is thoroughly familiar with the form and condition of the airport and with the location and nature of any obstructions in the vicinity.

Reg. 300_____ *Effective Jan. 21, 1944*

An aircraft dispatcher certificate limited to the dispatching of aircraft in military contract cargo operations may be issued by the Administrator to an applicant who (a) is at least 21 years of age; (b) has served in connection with the dispatching of aircraft in military contract cargo operations under a certificated aircraft dispatcher for a period of

*(See Regulations page 27)*

## Adopted

# STATUS OF AIR REGULATIONS

## Regulations as of February 1, 1944

### HOW TO OBTAIN PARTS, AMENDMENTS, AND MANUALS

*THOSE PARTS AND MANUALS ON WHICH A PRICE IS LISTED IN THE TABULATION WHICH FOLLOWS ARE ON SALE AT THE GOVERNMENT PRINTING OFFICE (SHOWN AS GPO IN TABLE), AND ARE NOT AVAILABLE FOR FREE DISTRIBUTION FROM THE CAA.*

The Government Printing Office is the official sales agency for all government publications and is separate and distinct from the CAA and the Department of Commerce. The rules of the Superintendent of Documents require that *remittances be made in advance* of shipment of publications, either by coupons sold in sets of 20 for $1 and good until used, or by check or money order payable to the *Superintendent of Documents, Government Printing Office.* Currency is sent at sender's risk. Postage stamps, foreign money, and smooth coins are not acceptable. A discount of 25 percent is allowable to book dealers and quantity purchasers of 100 or more publications, on condition that the purchasers will adhere to the public sales price set by the Superintendent of Documents and that publications shall not be overprinted with any advertising matter.

Eventually, all Parts and Manuals will be placed on sale; meanwhile, those not yet on sale (carrying remark, "Order from CAA only") may be obtained without charge from the CAA upon demonstration of valid interest on the applicant's part.

The following tabulation carries in the right-hand column the numbers of all effective amendments to each Part and Manual issued subsequent to its publication. Parts and Manuals obtained from the CAA will include all effective amendments, but amendments for Parts and Manuals purchased from GPO must be requested separately from the CAA. When requesting amendments from the CAA, please be sure to state Part numbers for which they are desired.

*ALL AMENDMENTS TO THE REGULATIONS, AND NOTICE OF NEW PARTS AND MANUALS ARE PRINTED IN THE CIVIL AERONAUTICS JOURNAL, AS RELEASED.*

Bound volumes of the complete Civil Air Regulations are no longer available. Parts and amendments are punched for filing in standard three-ring binders.

For your guidance we have listed the Parts and Manuals applicable to the various airmen certificates issued.

Pilots:
Parts 01, 20, 60, 501, 503, and Manual 60.

Airline Transport Pilots:
Parts 01, 04, 21, 27, 40, 60, 61, 98, 501, 503, and Manuals 04 and 60.

Lighter-Than-Air Pilots:
Parts 01, 22, 60, 501, 503, and Manual 60.

Aircraft Mechanics:
Parts 01, 04, 15, 18, 24, 501, 503, section 60.32, and Manuals 04, 15, and 18.

Aircraft Engine Mechanics:
Parts 01, 04, 13, 14, 18, 24, 501, 503, and Manuals 04, 14, and 18.

Parachute Technicians:
Parts 15, 25, 54, 60, and Release 144.

Air-Traffic Control-Tower Operators:
Parts 26, 60, and Manual 60.

Aircraft Dispatchers:
Parts 27, 40, 60, 61, and Manual 60.

Ground Instructors (rating in Civil Air Regulations):
Parts 01, 20, 51, 60, 501, 503, and Manual 60.

### PARTS CANCELED AND UNASSIGNED

Canceled Parts 60 and 03 now incorporated in Part 501; canceled Part 23 now incorporated in Part 51. Parts 90–96, inclusive, canceled. All other Part numbers not shown are unassigned.

## Civil Air Regulations

### Aircraft

| Part No. | Title | Date | Remarks | Price | Effective Amendments |
|---|---|---|---|---|---|
| 01 | Airworthiness Certificates | 10-15-42 | On sale at GPO | $0.05 | |
| 02 | Type and Production Certificates | 3-1-41 | On sale at GPO | .05 | |
| 04 | Airplane Airworthiness | 11-1-43 | On sale at GPO | .15 | |
| 13 | Aircraft Engine Airworthiness | 8-1-41 | On sale at GPO | .05 | |
| 14 | Aircraft Propeller Airworthiness | 7-15-42 | On sale at GPO | .05 | |
| 15 | Aircraft Equipment Airworthiness | 11-15-40 | In stock; order from CAA only | ------ | 15-1, 15-2. |
| 16 | Aircraft Radio Equipment Airworthiness | 2-13-41 | On sale at GPO | .05 | |
| 18 | Maintenance, Repair, and Alteration of Certificated Aircraft and of Aircraft Engines, Propellers, and Instruments. | 9-1-42 | On sale at GPO | .05 | |

### Airmen

| | | | | | |
|---|---|---|---|---|---|
| 20 | Pilot Certificates | 9-1-42 | On sale at GPO | $0.10 | 20-1 thru 20-6, Reg. Ser. 242, 247. |
| 21 | Airline Transport Pilot Rating | 10-1-42 | On sale at GPO | .05 | 21-1, thru 21-3, Reg. Ser. 278. |
| 22 | Lighter-Than-Air Pilot Certificates | 10-15-42 | On sale at GPO | .05 | Reg. Ser. 247. |
| 24 | Mechanic Certificates | 7-1-43 | On sale at GPO | .05 | |
| 25 | Parachute Technician Certificates | 12-15-43 | On sale at GPO | .05 | |
| 26 | Air-Traffic Control-Tower Operator Certificates. | 7-1-42 | On sale at GPO | .05 | 26-1, 26-2. |
| 27 | Aircraft Dispatcher Certificates | 10-1-43 | On sale at GPO | .05 | |
| 29 | Physical Standards for Airmen | 6-1-42 | On sale at GPO | .05 | 29-1. |

### Air Carriers

| | | | | | |
|---|---|---|---|---|---|
| 40 | Air Carrier Operating Certification | 11-1-42 | On sale at GPO | $0.10 | 40-1, 40-2. |

### Air Agencies

| | | | | | |
|---|---|---|---|---|---|
| 50 | Flying School Rating | 11-1-40 | On sale at GPO | $0.05 | 87, 113, 50-3, Reg. No. 216.[1] |
| 51 | Ground Instructor Rating | 7-1-42 | On sale at GPO | .05 | |
| 52 | Repair Station Rating | 10-1-42 | On sale at GPO | .05 | |
| 53 | Mechanic School Rating | 8-1-42 | On sale at GPO | .05 | |
| 54 | Parachute Loft Certificates and Ratings | 1-21-43 | On sale at GPO | .05 | |

### Air Navigation

| | | | | | |
|---|---|---|---|---|---|
| 60 | Air-Traffic Rules | 11-15-43 | On sale at GPO | $0.10 | 60-1. |
| 61 | Scheduled Air-Carrier Rules | 10-15-42 | Out of stock | .10 | 61-1 thru 61-15. |
| 66 | Foreign Air-Carrier Regulations | 1-15-42 | On sale at GPO | .05 | |

### Miscellaneous

| | | | | | |
|---|---|---|---|---|---|
| 97 | Rules of Practice Governing Suspension and Revocation Proceedings. | 12-10-43 | In stock; order from CAA only | ------ | |
| 98 | Definitions | 10-15-42 | On sale at GPO | $0.05 | |
| 99 | Mode of Citation of Regulations | 11-15-40 | In stock; order from CAA only | ------ | |

[1] No copies available. (Waiver of requirements.) Consult CAA inspector for specific provisions of this amendment.

## Regulations of the Administrator

| Part No. | Title | Date | Remarks | Price | Effective Amendments |
|---|---|---|---|---|---|
| 501 | Aircraft Registration Certificates | 3-31-43 | In stock; order from CAA only | | |
| 503 | Recordation of Aircraft Ownership | 3-31-43 | In stock; order from CAA only | | |
| 510 | General Regulations, Washington National Airport. | 9-26-41 | In stock; order from CAA only | | |
| 511 | General Aeronautical Rules for the Washington National Airport. | 9-26-41 | In stock; order from CAA only | | |
| 525 | Notice of Construction or Alteration of Structures on or Near Civil Airways. | 7-23-43 | In stock; order from CAA only | | |
| 531 | Seizure of Aircraft | 12-8-41 | In stock; order from CAA only | | |
| 532 | Reproduction and Dissemination of Current Examination Materials. | 1-15-43 | In stock; order from CAA only | | |
| 600 | Designation of Civil Airways | 3-1-42 | Not published [1] | | 1 thru 37.[1] |
| 601 | Designation of Airway Traffic Control Areas, etc. | 1-15-42 | Not published [1] | | 1 thru 58.[1] |

## Civil Aeronautics Manuals

| | | | | | |
|---|---|---|---|---|---|
| 04 | Airplane Airworthiness | 2-1-41 | Out of stock | | Release 50, 97,[2] 105,[2] 117,[2] 140.[2] |
| 14 | Aircraft Propeller Airworthiness | 12-1-38 | In stock; order from CAA only | | |
| 15 | Aircraft Equipment Airworthiness | 7-1-38 | On sale at GPO | .10 | |
| 16 | Aircraft Radio Equipment Airworthiness | 2-13-41 | In stock; order from CAA only | | Release 62. |
| 18 | Maintenance, Repair, and Alteration of Certificated Aircraft and of Aircraft Engines, Propellers, and Instruments. | 6-1-41 | On sale at GPO | .50 | |
| 50 | Flying School Rating | 12-40 | In stock; order from CAA only | | Release 77, 111. |
| 52 | Repair Station Rating | 2-41 | In stock; order from CAA only | | |
| 53 | Mechanic School Rating | 5-40 | In stock; order from CAA only | | |
| 60 | Air Traffic Rules | 8-1-43 | On sale at GPO | .15 | |

[1] *See Air Navigation Radio Aids.*
[2] *Only pertinent pages furnished.*

# Proposed Rules

*(Continued from page 24)*

lowing flight altitudes govern flights made in accordance with instrument flight rules:

*60.271 Along green or red civil airways.* (a) *Eastbound.* Aircraft making good a true course of from 0° (or 360°) to, but not including, 180° must fly at an odd thousand-foot level above sea level (such as 3,000, 5,000, or 7,000 feet); (b) *Westbound.* Aircraft making good a true course of from 180° to, but not including 360° or (0°) must fly at an even thousand-foot level above sea level (such as 2,000, 4,000, or 6,000 feet).

*60.272 Along blue or amber civil airways.* (a) *Northbound.* Aircraft making good a true course of from 270° to, but not including 90°, must fly at an odd thousand-foot level above sea level (such as 3,000, 5,000, or 7,000 feet); (b) *Southbound.* Aircraft making good a true course of from 90° to, but not including 270° must fly at an even thousand-foot level above sea level (such as 2,000, 4,000, or 6,000 feet).

*60.28 Crossing a civil airway.* Unless otherwise instructed by an airway traffic control center of the Administrator, a civil airway must not be crossed at an angle of less than 45° to such airway.

### MISCELLANEOUS RULES

*60.30 Parachute jump rules.* A person must not make any exhibition, test, training, or demonstration parachute jump, and no pilot or person in command of civil aircraft in flight shall permit any such parachute jump, unless the jumper is at all times at least 500 feet below and 2,000 feet horizontally from any cloud formation; and unless reasonable precautions are taken to ascertain that such jump will not create undue hazards to other aircraft in flight or persons on the ground.

*60.31 Air meet rules.* An air meet must not be held or conducted, or authorized to be held or conducted, within the United States unless a certificate of waiver covering the activities of such meet is issued by the Administrator. All activities conducted under authority of such waiver must comply with the conditions and terms set forth therein.

***Note.—Application for a certificate of waiver for an air meet should be made to the Administrator at least 15 days prior to the proposed air meet.***

*60.32 Certificate of waiver.* When in the opinion of the Administrator (1) the public interest will be best served by the nonobservance of any part of the air traffic rules for a particular activity and for a limited period of time and (2) such nonobservance will not adversely affect safety in air commerce, a certificate of waiver may be issued by the Administrator.

*60.320 Duration.* The duration of a certificate of waiver must be limited to the period prescribed on such certificate, except that it shall immediately expire at any time an authorized inspector of the Administrator shall demand the surrender of such certificate after inspection or examination.

*60.4 Definitions.* (It is thought advisable to delay the final drafting of definitions until comments on the proposals herein are received.)

# Regulations

*(Continued from page 25)*

at least 1 year within the 2 years immediately preceding application, and (c) has met all of the other requirements of part 27 for the original issuance of such certificate. The holder of such a certificate may have the limitation removed if he presents proof to the Administrator that he has served satisfactorily in connection with the dispatching of air carrier aircraft in scheduled operation under the supervision of a certificated aircraft dispatcher for a period of at least 90 days within the preceding 6 months and he is at least 23 years of age.

This regulation shall be effective for the duration of the war and not more than 6 months thereafter.

### Amdt. 60-1 ____ *Effective Dec. 21, 1943*

Strike §§ 60.95 to 60.954, inclusive, and insert in lieu thereof the following:

*60.95 Emergency regulations.*

*60.950 Definitions.*

(a) As used in this section (60.95), the term "aircraft" means all aircraft other than those operated by scheduled air carriers while on their certificated routes, the United States Army or Navy, the Civil Aeronautics Administration, or the Civil Aeronautics Board.

(b) A "designated landing area" is a landing area designated by the Administrator for the landing and take-off of aircraft during the period of national emergency.

(c) A "local flying area" is an area adjacent to a designated landing area, including any channel leading thereto, which has been set aside by the Administrator, or his authorized representative, for local flying and a "local flight" is a flight wholly within such area.

(d) A "vital defense area" is an area set aside by the Secretary of War, or the Administrator upon the request or approval of the Secretary of War, within which the operation of aircraft is prohibited or is authorized only subject to prescribed conditions.

(e) A "zone of military operations" is an area designated as such by the Secretary of War, or the Administrator upon the request or with the approval of the Secretary of War.

*60.951 Flight rules.*

(a) Except upon the prior approval of the Administrator, or his authorized representative, no person shall take off any aircraft from, or land any aircraft on, a place other than a designated landing area. If an emergency landing is made at other than a designated area the pilot shall make a report to the Administrator or his designee at the landing area of departure or arrival as soon as possible setting forth the reasons therefor.

(b) No person shall pilot an aircraft into or within a vital defense area or zone of military operations unless specific authority for the proposed flight has been issued by the agency having jurisdiction over the particular area or zone.

(c) No person shall leave an aircraft unattended under circumstances which would permit its operation by an unauthorized person without rendering the aircraft incapable of operation in a manner consistent with any instructions issued by the Administrator for this purpose.

*60.953 Landing area rules.*

(a) The operator of a designated landing area shall provide means by which all available current flight information bearing upon flights from the landing area may be secured by persons operating aircraft on the landing area.

(b) The operator of a designated landing area shall maintain adequate records which shall include the identification mark, make and model of the aircraft, pilot's name and certificate number, time of arrival, number of passengers, time of departure, point of destination, and other such information as may be required by the Administrator. Any authorized representative of the Army, Navy, Civil Aeronautics Administration, or Civil Aeronautics Board shall be permitted to inspect the landing area and have access to all records, buildings, and equipment.

(c) The Administrator may, at any time, cancel the designation of a landing area if he deems such action necessary to the public safety or in the interest of national defense.

### Amdt. 61-15 ____ *Effective Dec. 29, 1943*

The effective date of § 61.797 adopted October 22, 1943, is changed from January 1, 1944, to February 1, 1944.

## Pilot, Magneto at Fault In Crash at Uncle's Home

Charlie G. Burdette, Jr., was seriously injured in an accident which occurred 4 miles south of Eastaboga, Ala., on July 8, 1943. Burdette held a student pilot certificate and had received 7½ hours of dual flight instruction. Although his student certificate had not been endorsed by a flight instructor and he was not authorized to fly solo, this was his third solo flight. The aircraft, a Piper J–2, powered by a Continental 40 h. p. engine, was demolished.

Burdette secured clearance from the Anniston, Alabama Airport and took off for a local practice flight. Forty minutes later the plane was observed about 12 miles west of the airport circling the home of the student's uncle at an altitude of approximately 200 to 300 feet. Burdette then proceeded north for one-quarter mile and as he approached the home of his cousin, the engine sputtered, picked up, and finally stopped. For a few seconds following engine failure the plane appeared to remain in level flight, then suddenly the nose dropped and the plane fell off to the right, striking the ground an angle of about 35°, approximately 40 feet from the house.

Examination of the engine revealed that stoppage was due to failure of the single magneto and the lack of proper maintenance and servicing was evident. The terrain in the vicinity was suitable for a landing even by a student with limited experience.

The student's utter lack of elementary knowledge of the theory of flight was apparent by his statement, "The motor quit, while I was making a shallow turn to the right. . . . I had the stick all the way back and to the left but seeing the plane was going to crash I pushed it as far as I could to the front. About that time I hit."

It is apparent that the irresponsible action of the student pilot in making a solo flight before being authorized to do so by his instructor, and the lack of adequate maintenance of the aircraft contributed to the accident, while the probable cause was the student's lack of knowledge of how to control the aircraft following engine failure.[1]

[1] Order No. 2560, dated December 3, 1943, suspended Pilot Burdette's certificate for 6 months.

## Student Pilot Killed By "Show-off" Antics

Earl F. Reynolds, age 19, was fatally injured and his passenger, W. T. Stilley, age 17, received serious injuries in an accident which occurred near the Country Club Airport, Oklahoma City, Okla., on June 15, 1943. Reynolds held a student pilot certificate and had accumulated approximately 80 hours of solo flight time. Stilley had formerly held a student pilot certificate which expired May 29, 1943. He was employed as a mechanic's helper at the Country Club Airport. The aircraft, an Interstate Cadet S–1A–90F, was demolished.

Reynolds secured clearance for a local solo practice flight and, accompanied by Stilley, took off from the Country Club Airport. Thirty minutes later they were observed by the only known witness to the accident flying over an auxiliary landing field 2½ miles east-southeast of the airport. The aircraft approached the field and the pilot made a "touch" landing toward the south, during which the wheels contacted the ground about one-third of the distance of the field and the plane rolled 50 to 75 yards without the tail touching the ground. The pilot then applied power, took off and started a turn to the left with the left wing tip approximately 15 feet above the ground. When the aircraft had turned about 90° in an easterly direction (cross-wind) the nose dropped and the left wing tip struck the ground. The plane cartwheeled onto the right wing and stopped in an upright position about 135 feet from the point of first impact.

Examination of the wreckage revealed no indication of failure of any part of the aircraft prior to the accident. Dual controls were installed and operative. Weather conditions were favorable with unlimited ceiling and visibility and a south wind estimated at 25 m. p. h. The auxiliary field being used has a north-south grass runway with no obstructions at either end. All of the surrounding terrain is exceptionally smooth.

Pilot Reynolds, employed by Southern Aviation, Inc., as a helper in the maintenance of aircraft, had received flight instruction during his spare time and had permission to fly solo in the subject aircraft to build up his flying time. Investigation revealed that he had taken Stilley with him on previous flights without the consent or knowledge of the operator and had secured clearance without the clearance officer being aware that a passenger would be carried.

It appears that Pilot Reynolds was attempting to "show-off" at an extremely low altitude immediately after his wheel landing, and due to his inexperience and a fairly strong wind, he permitted the aircraft to slip into the ground.

This accident resulted from the pilot's loss of control of the aircraft while maneuvering at an extremely low altitude.

## Mountain Grounds Pilot Who Flew Rings Around It

Ford W. Ridenbaugh was seriously injured in an accident which occurred near Cumberland, Md., on July 5, 1943. Ridenbaugh held a student pilot certificate and had accumulated about 40 hours of solo flight time, all in the type of airplane involved. The aircraft, a Piper J–2, was demolished.

Ridenbaugh took off from Mexico Farms Airport, Cumberland. Shortly thereafter witnesses observed him diving, zooming, and circling at a low altitude over and around the home of a relative who lived on a mountainside about 2 miles northeast of the airport. During a climbing left turn the plane was stalled and dived into an adjacent mountain cove, striking the ground on the nose, left wing and landing gear at an angle of about 70°.

Examination of the wreckage revealed no indication of failure of any part of the aircraft prior to impact. The airplane had recently undergone extensive repairs to the right wing and landing gear and had not been inspected nor approved by the CAA. Investigation revealed that at least some of this repair work was accomplished by a noncertificated mechanic. In describing the flight, Ridenbaugh stated that the engine was operating satisfactorily and added, "I was in a left bank and the controls went sloppy so I had no further control." This would indicate clearly that the aircraft was stalled.

Subsequent to the accident the Administrator of Civil Aeronautics cited Ridenbaugh with certain violations of the Civil Air Regulations. After Ridenbaugh had waived his statutory rights to notice and hearing, the Board considered the evidence submitted in the citation and found that these violations constituted sufficient cause to suspend his student pilot certificate.

The probable cause of this accident was loss of control of the aircraft following a stall while the pilot was engaged in reckless flying at a dangerously low altitude.[1]

[1] Order No. 2483, issued October 25, 1943, suspended Ridenbaugh's certificate for 6 months.

## "A snapping sound and the controls slackened."

Instructor Adele Thorell and her student, Jack D. Payne, were seriously injured in an accident which occurred west of Michaud, La., on February 26, 1943. The instructor held a commercial pilot certificate with single-engine land, 0-80 h. p. and flight instructor ratings. She had accumulated approximately 370 solo hou s, all in the type of aircraft involved. Payne, a War Training Service elementary trainee, held a student pilot certificate and was reported to have flown approximately 50 hours prior to

(*See page 23 inside*)



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